

Application No. 09/329,923
Amendment dated April 28, 2003
Reply to Office Action of February 13, 2003

REMARKS

Applicants respectfully request reconsideration of the above referenced application in light of the amendments above and the remarks that follow.

The Examiner rejected claims 1-23 under 35 U.S.C. § 103(a) as being unpatentable over Cooper et al. (U.S. 5,729,673 and Bronfeld et al. (U.S. 6,309,144).

Applicants respectfully traverse the rejection.

With respect to independent claim 1, the Examiner contends that Cooper teaches a software control method for forming a two dimensional view of a computer defined graphical model, generating a drawing data item associated with a component of the two dimensional view and adding the drawing item to the view responsive to user activation.

The Examiner concedes that Copper does not specifically describe forming a user interface to control the addition. The Examiner contends, however, that Bronfeld teaches forming a separate sketcher plane interface to add a drawing item to a model. Based thereon, the Examiner contends that it would have been obvious to a person of ordinary skill to incorporate this feature into Cooper because it would provide a convenient way to edit a model.

Applicants respectfully submit that the prior art cited by the Examiner does not render claim 1 unpatentable. By way of background, the claimed invention relates to the process of extracting drawing data from a three-dimensional model and drawing a two-dimensional model based on the extracted drawing data. In prior art systems, the transfer of drawing data between a three-dimensional model and a corresponding two-

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dimensional model was automatic and without user intervention. If, during the transfer process, a user desires to change a specific characteristic of any drawing data to be incorporated in the resulting two-dimensional model, the user must wait until the two-dimensional model is completely drawn and then introduce the desired modifications directly to the two-dimensional model. This prior art approach is cumbersome and time consuming -- especially if a large amount of drawing data is to be transferred to the two-dimensional model.

Under the present invention, the user is provided with control over the process of transferring drawing data extracted from the three-dimensional model to the two-dimensional model. With this control, the user can modify, delete or perform other changes to the extracted drawing data as the transfer process is occurring and before the two-dimensional model is completely drawn. Thus, the present invention provides the user with an efficient method for controlling the characteristics of a two-dimensional model that is generated from drawing data extracted from a three-dimensional model. Applicants respectfully submit that the prior art references cited by the Examiner do not teach this.

In particular, Cooper teaches a video editing method that includes displaying a two dimensional projection plane that is derived from a three dimensional projection surface. Specifically, the two-dimensional projection plane is a rectangular frame that a user can manipulate with handles attached thereto. (See column 1, lines 44-53, FIG. 3.) (The two-dimensional projection is not a two-dimensional visualization of a three-

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dimensional model.) The user manipulates the orientation/position of the projection plane until a desired orientation/position is obtained. Once the desired projection plane is obtained, a three-dimensional model can then be drawn in an orientation that is consistent with the projection plane. If the user is not satisfied with the orientation of the model, then the user must then again select a two-dimensional projection plane and manipulate it to the desired orientation. Copper does not teach, however, extracting drawing data from a three-dimensional model and transferring the extracted drawing data to a two-dimensional model under the control of the user, as is claimed.

Furthermore, Bronfeld teaches providing a user with a two-dimensional sketcher plane for sketching an object to be added to a three-dimensional model and in which the sketcher plane is aligned with a point of interest within the three-dimensional model. In Bronfeld, the two-dimensional visualization is of a sketched object and not of the three-dimensional model. Bronfeld also does not teach, extracting drawing data from a three-dimensional model and transferring the extracted drawing data to a two-dimensional model under the control of the user, as is claimed. Accordingly, Applicants respectfully submit that claim 1 is distinguishable over both Cooper and Bronfeld and notice to the effect that claim 1 is in condition for immediate allowance is respectfully requested.

Claims 2-14 depend from independent claim 1 and define further features and structure of the method. Thus, these claims are patentable for the reasons noted above with respect to claim 1 as well for the additional features recited therein. Accordingly,

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notice to the effect that claims 2-14 are in condition for immediate allowance is respectfully requested.

With respect to independent claims 15, 18, 19, 21 and 22, the Examiner contends these claims are unpatentable over Cooper and Bronfeld for the same reasons given regarding claim 1. Applicants respectfully submit, therefore, that these claims are patentable for the reasons explain with respect to claim 1 and notice to the effect that claims 15, 18, 19, 21 and 22 are in condition for immediate allowance is respectfully requested.

Claims 16-17, 20 and 23 depend from independent claims 15, 19 and 22, respectively, and define further features and structure of the method. Thus, these claims are patentable for the reasons noted above with respect to claims 15, 19 and 22 as well for the additional features recited therein. Accordingly, notice to the effect that claims 16-17, 20 and 23 are in condition for immediate allowance is respectfully requested.

Applicants have made a diligent effort to place this application in condition for immediate allowance and notice to this effect is earnestly solicited. The Examiner is respectfully requested to reconsider the application at an early date with a view towards issuing a favorable action thereon. If upon the review of the application, the Examiner is unable to issue an immediate notice of allowance, he is respectfully requested to telephone the undersigned attorney at the number listed below with a view towards resolving the outstanding issues.


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Early and favorable action is respectfully requested.

Respectfully submitted,

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Joseph Levi
Registration No. 41,152
Attorney for Applicants

CLIFFORD CHANCE US LLP
200 Park Avenue
New York, New York 10166
(212) 878-8564